

Title (en)  
THREE-PHASE PERMANENT MAGNET SYNCHRONOUS MOTOR

Title (de)  
DREIPHASIGER PERMANENTMAGNETSYNCHRONMOTOR

Title (fr)  
MOTEUR SYNCHRONE À AIMANT PERMANENT TRIPHASÉ

Publication  
**EP 2819282 A4 20160413 (EN)**

Application  
**EP 12869166 A 20120730**

Priority  
• JP 2012038656 A 20120224  
• JP 2012069325 W 20120730

Abstract (en)  
[origin: EP2819282A1] A cogging torque can be significantly reduced in a three-phase permanent magnet-type synchronous motor. In a three-phase permanent magnet-type synchronous motor where a fraction of  $2N/3P$  is not an integer assuming that the number of magnetic poles of a rotator 3 is  $P$  and the number of slots of a stator 2 is  $N$ , the stator 2 includes a tooth 5 facing a surface of a magnetic pole of the rotator 3 via a void and a tooth width of the tooth 5 in the circumferential direction is approximately  $1/2$  of a slot pitch of the stator 2. In a three-phase permanent magnet-type synchronous motor of an outer rotor type, the tooth 5 of the stator 2 has a radial cross section with an approximately uniform shape from a tooth tip portion to a tooth root portion or a radial cross section with a larger tooth root portion than a tooth tip portion so as to allow mounting a winding unit from the tooth tip portion. The winding unit is preliminarily wound by a coil.

IPC 8 full level  
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CPC (source: EP US)  
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Citation (search report)  
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